

What is claimed is:

1. Xylitol-producing *Candida tropicalis* CJ-FID (KCTC 10457BP).

5 2. An alginate bead prepared by adding the *Candida tropicalis* to an aqueous alginic acid solution with stirring to obtain a uniform solution and dripping the uniform solution to a calcium salt.

10 3. A method for producing xylitol, comprising:
preparing a xylitol-producing fermentation medium containing xylose and sucrose;

inoculating the alginate bead of claim 2 onto the fermentation medium; and

fermenting the fermentation medium in a fermenter.

15 4. The method of claim 3, further comprising:
purifying with an activated charcoal column of a xylitol-containing fermentation culture produced by the fermentation;

20 purifying with an anion column of a xylitol solution produced by the purification with the activated charcoal column; and

preparing a xylitol powder from a xylitol solution produced by the purification with the anion column.